

DR. FRANCIS RYAN, ZOOLOGIST, DEAD

Columbia Scientist Probed
Secrets of Smallest Life

7-15-63
Dr. Francis J. Ryan, chairman of the department of zoology at Columbia University, died of a heart attack yesterday morning at his home at 80 La-Salle Street. He was 47 years old.

Dr. Ryan had occupied many stations at the university. He enrolled as a student in 1933, received a Ph.D. in zoology in 1941, and then was successively an assistant professor, associate professor, full professor and department head.

His horizons, however, were international, and although he used the academic community on Morningside Heights as his permanent base, he was often overseas, in teaching, in research, on fellowships and just traveling.

Dr. Ryan worked very broadly in zoology and biology and conducted advanced research in experimental embryology. But in the last decade he had specialized in microbial genetics. It is the study of the genetics of micro-organisms such as bacteria and yeasts, their reproduction and development of new strains by mutation. In simplest terms, his field was the study of life on a minute scale.

He did extensive research on *escherichia coli*, the intestinal bacteria that produce many generations in a few hours, and on *neurospora*, a fungus. Working closely with his advanced students, he sought to understand the way in which information about an organism is imprinted in its genetic structure, and how that structure is changed.

Consultant in Japan

Dr. Ryan was Fulbright Professor at Tokyo University in 1955-56. The Japanese have worked out very sophisticated commercial ways of using bacteria, yeasts and molds for fermentation leading to the production of many products including meat tenderizers, flavor enhancers and medicines. Dr. Ryan worked as a consultant to Japanese microbiologists in industry and in universities.

A science writer who knew him, visited Japan several years ago and found that "as soon as I mentioned the name, Dr. Ryan, there was an effusion of friendliness and an invitation to come right over and see them."

Dr. Ryan, a bearded and somewhat bald pipe-smoker, impressed nearly everyone with his warmth and thoroughness. "He had that indefinable, but unmistakable, aspect—a twinkle in his eyes," a friend said.

Students in his undergraduate course in general zoology and in his course on vertebrate zoology and evolution were used to finding minutely detailed blackboard drawings "seemingly drawn with multicolored fingers of chalk" ready to illustrate his lectures.

Last February, Soviet scientists reported bringing back to life two prehistoric tritons—vertebrates resembling lizards—after they had been frozen for 5,000 years. Dr. Ryan told reporters that it was a one-in-a-million chance that the salamanders had been frozen 5,000 years.

"I suggest they got there recently," he said. He was right, it later developed.

Dr. Ryan's work in the nineteen-fifties disproved the claims of Trofim Lysenko that evolutionary changes are initiated by environment. Dr. Lysenko was the plant biologist whose views became orthodox doctrine for Soviet geneticists by administrative fiat.

Dr. Ryan's chief pleasure was travel, and he explored Alaska, South America, the South Seas, Russia and Europe, but his New York hobby took him a scant three-minute walk to the Barnard College courts for tennis and handball.

With Dr. Ruth Sager he was author of the book "Cell Heredity," published in 1961. He was appointed a member of the President's Committee on Japanese-American Scientific Cooperation this year. He was a member of the American Academy of Arts and Sciences and a trustee of the Cold Spring Harbor Biological Laboratory on Long Island.

In 1950-51 he was Fulbright and Guggenheim Fellow at the Pasteur Institute in Paris and in 1960-61 he was visiting professor at the University of Jerusalem.

Surviving are his widow, Mrs. Elizabeth Wilkinson Ryan; his father, Joseph L. Ryan; two brothers, Robert W. and Richard J. Ryan, and three sisters, Mrs. Marguerite Dibble, Mrs. Rosemarie Perry and Mrs. Jean K. McCarthy.